

REMARKS

Claims 1-7 are in the application as filed. The Examiner rejected Claims 1-3 as anticipated and objected to claims 4-7 under 37 CFR 1.75 as being in improper multiple dependent form. Claims 4-7 have been amended to remove the improper multiple dependency and new Claims 8 and 9 have now been added.

REJECTION UNDER 35 USC 102(b)

Claims 1-3 were rejected as the Examiner over Asada (US 5,645,765). The Examiner asserts that the invention is anticipated by Asada. Asada is cited as teaching a paste with similar non-toxic ingredients and with good solderability.

Applicants respectfully disagree that their invention is anticipated by Asada..

Applicant's claims disclose, in part:

1. An electrically conductive paste composition, based on total composition, comprising:
 - 45.0 to 85.0 wt % of base metal particles selected from copper powder, nickel powder, copper-nickel alloy powder and mixtures thereof;
 - 5 to 15 wt % glass frit; and
 - 0.1 to 10 wt % metal oxide particles selected from SnO₂, V₂O₅ and MoO₃; andwherein the particles are dispersed in organic medium. Dependent Claims specify the organic medium as methyl methacrylate and butylcarbitolacetate. The glass used in the instant case has a glass softening point of 500-to 650 degrees C with a firing temperature of 700-770 degrees C.

Asada discloses a lead free paste comprising (a) a lead-free glass frit having a crystallization temperature of 700.degree.-870.degree. C. and consisting essentially of, by weight %,

(a) 20-38% of SiO₂, 5.5-13.5% of B₂O₃, 8-15.5% of Al₂O₃, 4-19% of CaO, 20-29% of ZnO, 0-6% of ZrO₂, 4-16% of TiO₂ and 0.1-3.8% of MoO₃ ;

(b) finely divided particles of electrically conductive material;

(c) at least one inorganic additive selected from the group consisting of bismuth oxide, zinc oxide-containing oxide material, manganese oxide, copper oxide and molybdenum oxide; and

(d) an organic medium in which all of said components (a), (b) and (c) are dispersed.

Claim 2 of that patent discloses electrically conductive material to be selected from the group consisting of Ag, Au, Pd, Pt, Cu, Ni and alloys of the aforesaid metals. 20-

38% of SiO.sub.2, 5.5-13.5% of B.sub.2 O.sub.3, 8-15.5% of Al.sub.2 O.sub.3, 4-17.0% of CaO, 20-29% of ZnO, 0-6% of ZrO.sub.2, 4-16% of TiO.sub.2 and 0.1-3.8% of MoO.sub.3

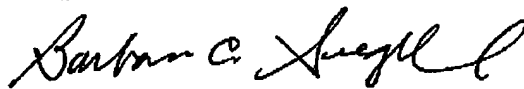
The preferred glass transition temperatures in Asada were 550-680 degree C.

Applicant respectfully disagrees that the present claims are antiipated. Applicant maintains that the present invention is a selection invention over Asada (US 5,645,765). While applicant acknowledges some similarities between Asada and the subject matter of its claims, there are some differences which remove the art as a 102(b) reference. . Among these differences are certain oxide additives, such as SnO₂, V₂O₅ and MoO₃. Asada discloses use of some oxides above, of which only the MoO₃ is found in the presently claimed application. Claim 1 has new been amended to removethe MoO₃. Further Asada does not teach the specific organic mediums that we use, e.g. methyl methacrylate and butylcarbitolacetate, as in applicants' claim 4.

In view of the present amendments and these differences, allowance of Claims 1-9, as now amended, is respectfully requested.

Should anything be required to advance the allowance of this application, the Examiner is urged to contact applicants attorney at the telephone number below.

Respectfully submitted,



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Dated: 3-23-06